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IN THE CLAIMS

Please amend the claims as follows.

1.   (canceled)

2.   (canceled)

3.   (canceled)

4.   (currently amended) ~~A method according to claim 2 to convert an image consisting of input pixels into an output image, the method comprising the steps of:~~
     ~~— determining~~
     ~~— a modified pixel that is based upon an input pixel value and~~
     ~~— a quantization set for the modified pixel value consisting of available quantization values, each quantization value corresponding to an available output pixel value combination of a cluster of pixels, said output pixel value combination resulting in a density value change in an output image;~~
     ~~— selecting a quantization value out of said quantization set based upon said modified pixel value;~~
     ~~— calculating an error value that depends on the modified pixel value and the selected quantization value;~~
     ~~— modifying at least one pixel by adding a fraction of the calculated error;~~
     ~~wherein the method takes into account the density value change of an area in the output image corresponding to more than one pixel~~
     An error diffusion method to convert an image comprising input pixels having values into an output image comprising output pixels having values, the method comprising the steps of:
     determining a modified input pixel value based upon:
               an input pixel value;
               a fraction of an error value obtained in a previous step;
     determining for said modified input pixel value a quantization set consisting of quantization values, each quantization value corresponding to setting an available output pixel value combination of a cluster of pixels, said output pixel value combination resulting in a density

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value change in said output image;

   selecting a quantization value out of said quantization set based upon said modified pixel value;

   calculating an error value that depends on the modified input pixel value and the selected quantization value;

wherein the error value takes into account the density value change of an area in the output image corresponding to more than one pixel.

5.   (original) A method according to claim 4 wherein said cluster comprises at least two pixels.

6.   (original) A method according to claim 4 wherein the pixels corresponding to the area in the output image coincide with the pixels of said cluster.

7.   (original) A method according to claim 4 wherein said density value changes are taken into account in determining said available calculated quantization values of said quantization set for said pixel.

8.   (original) A method according to claim 4 wherein said density value changes are taken into account in determining said modified pixel value for said pixel.

9.   (original) A method according to claim 4 wherein the clusters of pixels are unequal in size for at least two possible quantization values.

10. (original) A method according to claim 4 wherein the cluster size is adjusted depending on the input pixel value.

11. (original) A method according to claim 4 wherein the cluster size is adjusted depending on the local contrast of the pixels surrounding the input pixel.

12. (original) A method according to claim 4 wherein said method for error diffusion halftoning further comprises a halftone dot distribution alteration step in low and high intensity image regions.

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13. (original) A method according to claim 4 wherein the method for error diffusion halftoning is a multilevel halftoning method.

14. (original) A method according to claim 4 wherein the output value of the pixel is set to the corresponding minimum or maximum output value if the input pixel value is the minimum or maximum possible input value.

15. (currently amended) A method for halftoning a color image comprising plural color separated images wherein at least one of the color separated images is halftoned using a method according to claim ~~1~~ 4.

16. (currently amended) ~~A method for error diffusion according to claim 2 to convert an image comprising plural separated images representing input pixels into an output image, the method comprising the steps of:~~
~~determining~~
~~a modified pixel that is based upon an input pixel of a first separated image and~~
~~a quantization set for said modified pixel consisting of available quantization~~
~~values, each quantization value corresponding to an available output pixel value~~
~~combination of a cluster of output pixels, said output pixel value combination~~
~~resulting in a density value change in an output image,~~
~~selecting a quantization value out of said quantization set based upon said modified~~
~~pixel value,~~
~~calculating an error value that depends on the modified pixel value and the~~
~~selected quantization value,~~
~~modifying at least one pixel by adding a fraction of the calculated error,~~
~~wherein the method takes into account the density value change of an area in the output~~
~~image corresponding to at least one pixel in a second separated image~~
A vector error diffusion method to convert an image comprising input pixels having vectors into an output image comprising output pixels having vectors, the method comprising the steps of:
determining a modified input pixel vector based upon:
an input pixel vector;
a fraction of an error vector obtained in a previous step;
determining for said modified input pixel vector a quantization set consisting of quantization

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vectors, each quantization vector corresponding to an available output pixel vector combination of a cluster of pixels, said output pixel vector combination resulting in a density value change in said output image;

selecting a quantization vector out of said quantization set based upon said modified pixel vector;

calculating an error vector that depends on the modified input pixel vector and the selected quantization vector.

wherein: the error vector takes into account the density value change of an area in the output image corresponding to more than one pixel.

17. (original) Method according to claim 16 wherein the overlap between halftone dots in different separated images is taken into account.

18. (original) Method according to claim 16, in which the plural separated images represent plural color separations.

19. (original) Method according to claim 17, in which the plural separated images represent plural color separations.

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